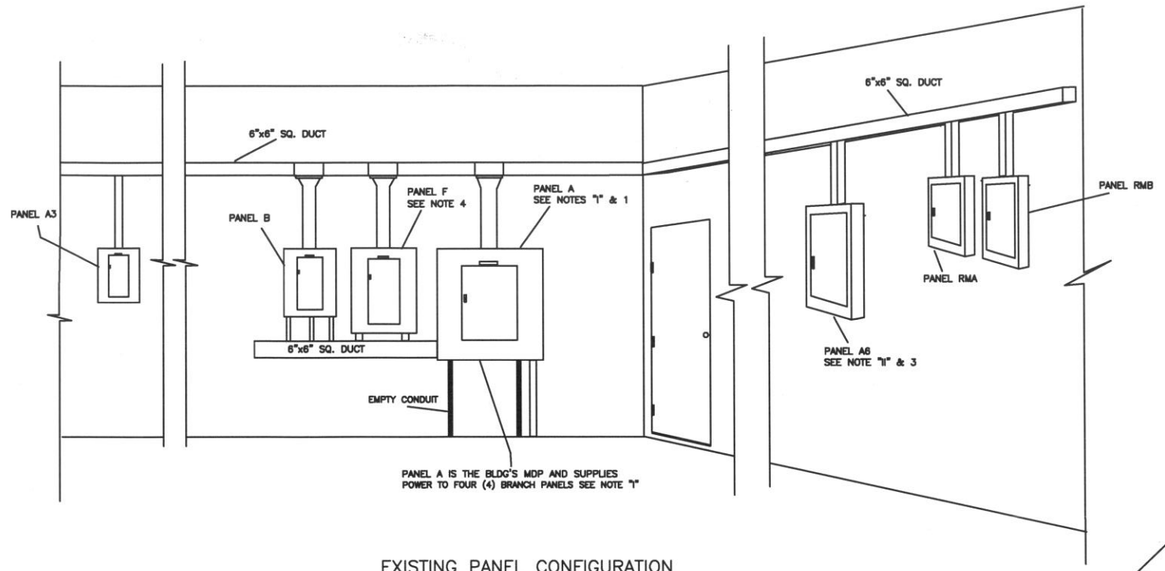
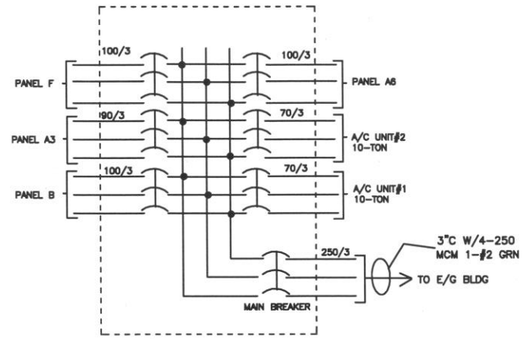
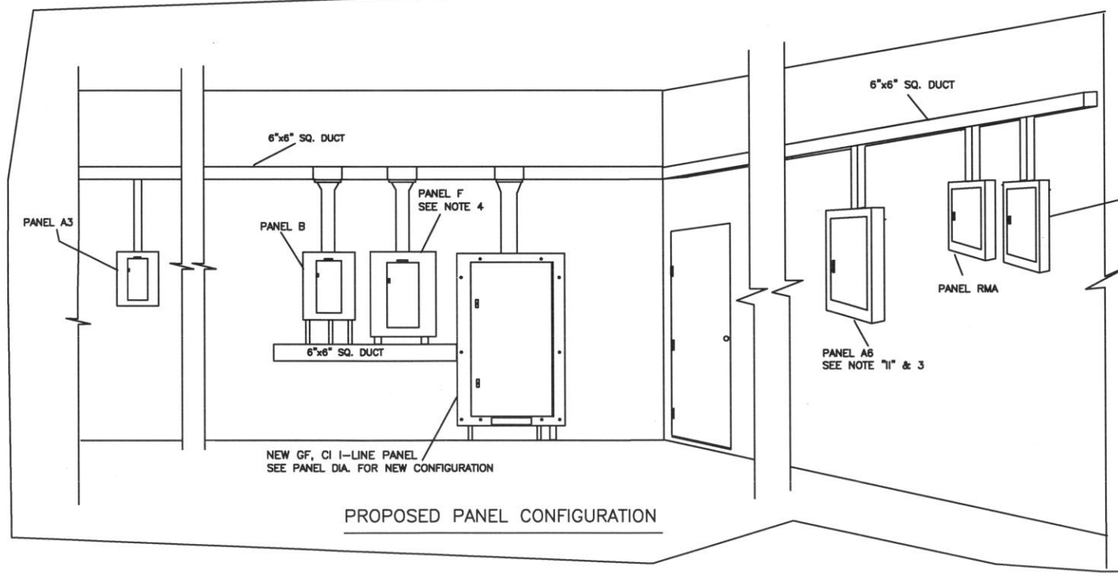


EXISTING PANEL CONFIGURATION

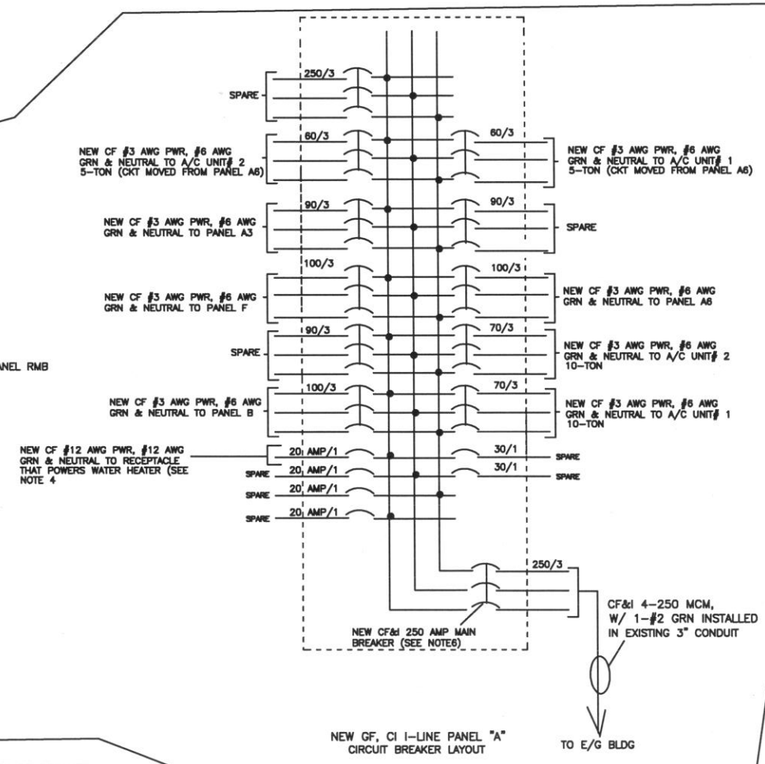


EXISTING PANEL A
CIRCUIT BREAKER LAYOUT

EXISTING PANEL WIRING DIAGRAM



PROPOSED PANEL CONFIGURATION



PROPOSED PANEL WIRING DIAGRAM

NOTES:

CONTRACTOR FURNISHED AND INSTALLED (CF&I), GOVERNMENT FURNISHED (GF) GALVANIZED RIGID CONDUIT (GALV.), ENGIN GENERATOR (E/G), MAIN DISTRIBUTION PANEL (MDP), AIR CONDITIONING (A/C)

I. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSION, PRIOR TO PURCHASING MATERIALS

II. PANEL A POWERS THE FOLLOWING:
PANEL F, PANEL A3, PANEL B, PANEL A6, 10-TON A/C UNIT#1 AND 10-TON A/C UNIT#2

II. PANEL A6 POWERS THE FOLLOWING:
PANEL RMA, PANEL RMB, 5-TON A/C UNIT#1 AND 5-TON A/C UNIT#2

1. THE CONTRACTOR SHALL REMOVE THE EXISTING BREAKER PANEL "A"; AND INSTALL A NEW GF BREAKER PANEL. THE NEW PANEL IS A SQUARE D I-LINE HCM PANEL. THE PANEL SHALL BE INSTALLED IN THE SAME LOCATION AS EXISTING. THE PANEL SHALL BE MOUNTED TO BACK WALL USING APPROPRIATE SIZE MOUNTING HARDWARE. THE CONTRACTOR SHALL FOLLOW ALL APPLICABLE NATIONAL ELECTRICAL CODE (NEC) STANDARDS WHEN MOUNTING NEW PANEL.

2. IN ADDITION TO REPLACING PANEL A, THE CONTRACTOR SHALL REPLACE ALL PANEL A BRANCH CIRCUIT POWER CABLES WHICH ARE FEEDING OTHER BUILDING POWER PANELS. PANEL A BRANCH POWER CABLES THAT FEED A/C UNITS 1&2 SHALL NOT BE REPLACED; EXISTING A/C UNIT CONDUCTORS SHALL BE RE-TERMINATED ON BREAKERS IN THE NEWLY INSTALLED I-LINE POWER PANEL.

3. THE CONTRACTOR SHALL REMOVE, FROM PANEL A6, THE TWO (2) ELECTRICAL CIRCUITS FEEDING 5-TON A/C UNITS# 1&2. THE NEW POWER FEED TO THE 5-TON UNITS SHALL BE SUPPLIED BY THE NEW I-LINE BREAKER PANEL. ALSO, THE CONTRACTOR SHALL RUN NEW POWER CABLE FROM THE NEW I-LINE PANEL TO THE TWO (2) 5-TON A/C UNITS. THE NEW CABLE SHALL BE #4 AWG.

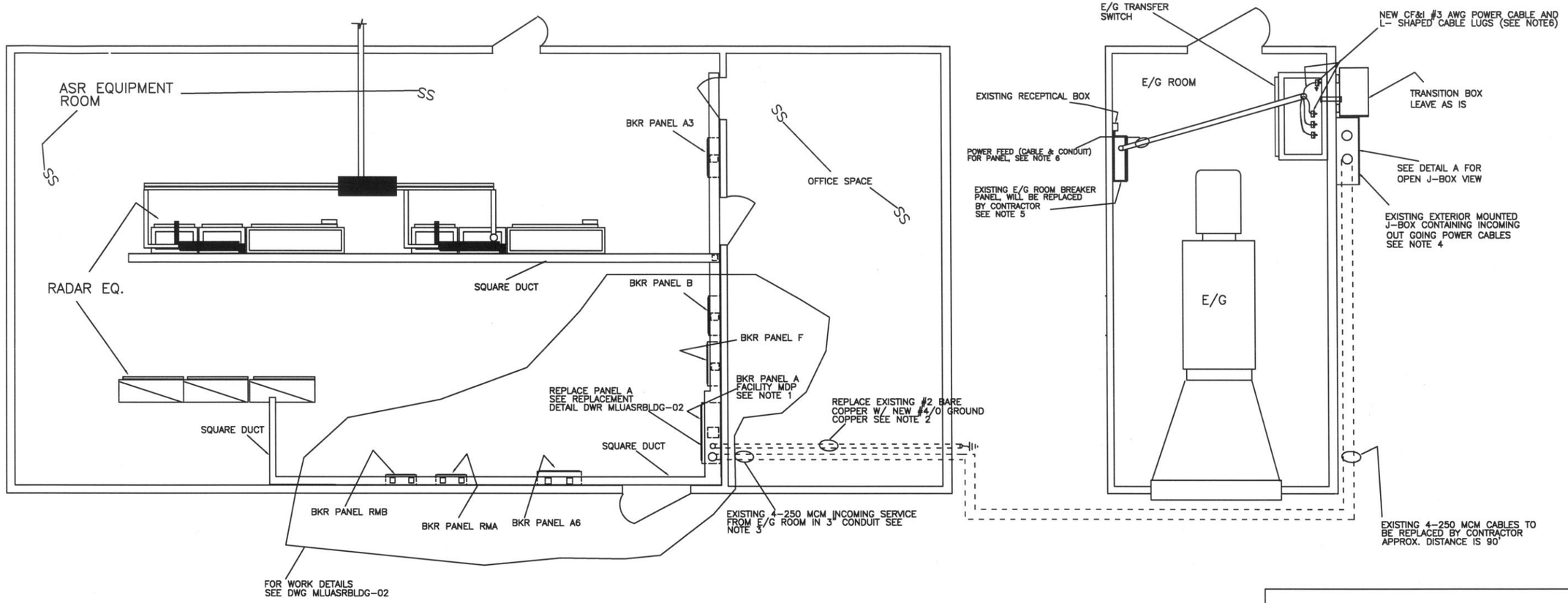
4. THE CONTRACTOR SHALL REMOVE, FROM PANEL F, THE ELECTRICAL CIRCUIT FEEDING THE WATER HEATER. THE NEW POWER FEED TO THE WATER HEATER SHALL BE FEED FROM THE NEW I-LINE BREAKER PANEL. ALSO THE CONTRACTOR SHALL RUN NEW #12 AWG FROM THE NEW I-LINE PANEL TO THE BLDG WATER HEATER.

5. THE NEW GF I-LINE PANEL COMES WITH INSTALLED BREAKER (WITH THE EXCEPTION OF THE MAIN BREAKER). THE CONTRACTOR SHALL TERMINATE NEW CABLE AS OUTLINED IN THE PROPOSED BREAKER WIRING DIAGRAM.

6. THE CONTRACTOR SHALL PURCHASE AND INSTALL A NEW 250 AMP MAIN BREAKER FOR INSTALLATION IN THE NEW I-LINE PANEL. THE GF PANEL IS A SQUARE D PANEL WITH CATALOG # 12176132970010001 AND IS TYPE HCM. THE NEW CF MAIN BREAKER SHALL BE QUICK-MAKE, QUICK BREAK BOLT-ON, THERMAL-MAGNETIC TYPE AND HAVE A MINIMUM INTERRUPTING RATING OF 30,000 AMP, SYMMETRICAL.

MLU ASR BLDG. ELECTRICAL COMPONENTS REPLACEMENT DETAILS

DRAFTED BY: KEN GRAVES	DR.# MLUASRBLDG-02



PLAN VIEW

NOTES:

CONTRACTOR FURNISHED AND INSTALLED (CF&I), GOVERNMENT FURNISHED (GF) GALVANIZED RIGID CONDUIT (GALV.), ENGIN GENERATOR (E/G), MAIN DISTRIBUTION PANEL (MDP)

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSION, PRIOR TO PURCHASING MATERIALS

1. THE CONTRACTOR SHALL REMOVE THE EXISTING BREAKER PANEL "A"; AND INSTALL A NEW GF BREAKER PANEL. THE NEW PANEL IS A SQUARE D I-LINE HCM PANEL. THE PANEL SHALL BE INSTALLED IN THE SAME LOCATION AS EXISTING. THE PANEL SHALL BE MOUNTED TO BACK WALL USING APPROPRIATE SIZE MOUNTING HARDWARE. THE CONTRACTOR SHALL ADHERE TO ALL APPLICABLE NATIONAL ELECTRICAL CODE (NEC) STANDARDS WHEN MOUNTING NEW PANEL.

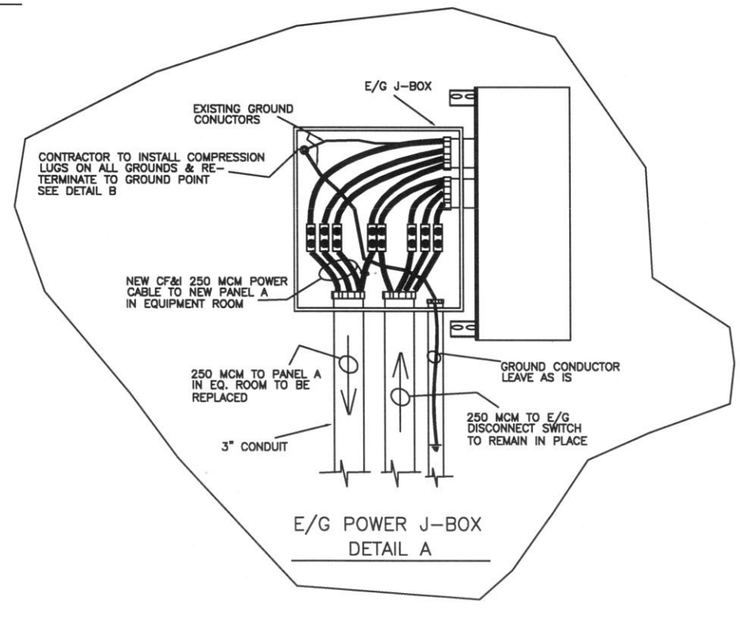
2. THE CONTRACTOR SHALL REMOVE THE EXISTING BARE COPPER #2 AWG GROUND CONDUCTOR FROM METAL CONDUIT AND INSTALL A NEW #4/0 GROUND CONDUCTOR. THE #4/0 SHALL RUN FROM NEWLY INSTALLED I-LINE PANEL AND TIE INTO THE EXISTING BUILDING GROUND COUNTERPOISE SYSTEM. THE CONTRACTOR SHALL EXOTHERMIC WELD THE NEW #4/0 TO THE EXISTING BUILDING COUNTERPOISE SYSTEM. IF THE CONTRACTOR IS UNABLE TO LOCATE THE EXISTING BUILDING COUNTERPOISE SYSTEM, THEN A 3/4"x10' COPPER CLAD GROUND ROD WILL BE INSTALLED; THE NEW #4/0 GROUND WIRE WILL BE EXOTHERMICLY WELDED TO THAT ROD.

3. THE CONTRACTOR WILL BE REQUIRED TO REPLACE THE EXISTING SET OF 4-250 MCM CABLES WITH WEN 250 MCM CABLE. THE CONTRACTOR SHALL INSTALL THE CABLE IN AN EXISTING 3" METAL CONDUIT. SEE PROJECT DRAWINGS FOR CABLE ROUTING AND APPROXIMATE DISTANCES.

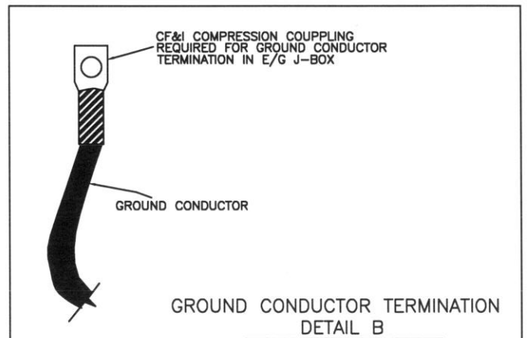
4. THERE ARE TWO (2) SETS OF 250 MCM CABLES INSIDE THE J-BOX. ONE SET SUPPLIES POWER TO PANEL A IN EQ. ROOM THE SECOND SET IS THE INCOMMING POWER FEED AND WILL REMAIN IN PLACE. THE CONTRACTOR SHALL REPALCE PANEL A SUPPLY CABLES.

5. THE CONTRACTOR SHALL REPLACE THE EXISTING SINGLE PHASE, 120/240 VOLT E/G BREAKER PANEL. WITH A NEW SQUARE D NQOD TYPE BREAKER PANEL (OR APPROVED EQUAL). THE PANEL SHALL HAVE A HINGED DOOR, 100 AMP MAIN BREAKER. ALL BREAKERS SHALL BE BOLT-ON. THE PANEL SHALL HAVE 9-20 AMP SINGLE POLE BREAKERS AND 3-20 AMP DOUBLE POLE BREAKERS. THE CONTRACTOR SHALL BE REQUIRED TO RECONNECT ALL ROOM CIRCUITS TO THE NEWLY INSTALLED PANEL.

6. THE CONTRACTOR SHALL REPLACE THE EXISTING BREAKER PANEL SUPPLY POWER CABLES WHICH RUNS FROM THE E/G TRANSFER SWITCH TO THE E/G ROOM PANEL. THE EXISTING FEED CABLES ARE TERMINATED ON CABLE LUGS INSTALLED ON THE LOAD SIDE OF THE TRANSFER SWITCH. THE CONTRACTOR SHALL BE REQUIRED TO INSTALL NEW L-SHAPED CABLE LUGS (REQUIRED FOR NEW POWER CABLE) ON THE LOAD SIDE OF THE E/G TRANSFER SWITCH. THE NEW LUGS SHALL BE INSTALLED NEXT TO EXISTING LOAD SIDE TRANSFER SWITCH CABLE LUGS. NOTE: NEW LUGS SHALL BE REQUIRED FOR POWER, NEUTRAL AND GROUND CONDUCTORS. THE NEW BREAKER PANEL SUPPLY POWER CABLE SHALL BE #3 AWG.



E/G POWER J-BOX
DETAIL A



GROUND CONDUCTOR TERMINATION
DETAIL B

MLU ASR BLDG. ELECTRICAL COMPONENTS REPLACEMENT DETAILS

DRAFTED BY: KEN GRAVES	DR.# MLUASRBLDG-01